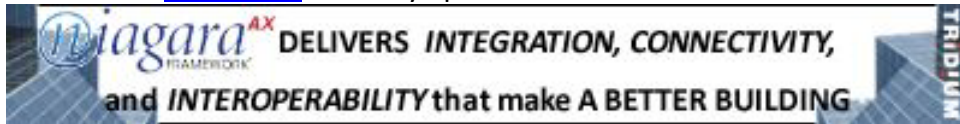


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The Intelligently Networked Building

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Embedded, "smart" devices pervade our environment. They are usually hidden behind the walls and ceilings of the buildings we live and work in and are responsible for everything from environmental control (air and water temperature, humidity, lighting levels, air quality), to security (access control, intrusion detection), to electric metering, to the production lines that make the goods we buy. These unseen devices are the brains that operate our world allowing us to focus on other things.

The world of embedded devices is characterized by literally hundreds of different devices that run on different protocols. Some are considered standards, other are artefacts of substantial investments in legacy systems. And unlike the PCs on our desks, these legacy systems have useful economic lives on the order of 10-15 years, not 3-4 years. These devices have much intelligence and capabilities in their own right. They can tell us what they are doing, what conditions they sense, what decisions they are making, or not making.

They are aware of each other and the actions that each is taking. The reality is that embedded devices can all be connected and integrated together to create an intelligent building information network whether it be a single building or in a campus environment.



So what is an intelligent building information network? I define it as *"a smart network that leverages the power of open standards building automation and IP connectivity to monitor, control and repair equipment and provide a comprehensive view into all the building assets to optimize their functions, create performance efficiencies, reduce costs and generate maximum returns"*.

What factors drive intelligent building information networks? Here are a few:

- Today's challenging economy
- The need to cut costs, do more with limited facility and IT resources; make personnel more productive; get the most out of all the applications by sharing critical data
- Making business decisions with real-time information and in a timely fashion
- Increasing costs for energy, service and maintenance
- Maintaining tenant satisfaction and maximizing their lifetime value

- The necessity to drive down CapEx and OpEx
- Operational excellence is now a must for successful long term profitability
- The shifting expectation of the IT suite to deliver more results and contribute to the financial performance of the business

As with teams of people, the effectiveness of intelligence increases when information is shared and correlated. Metcalf's law highlights this by positing that the value of the network increases in relation to the square of the connections.

The world of building control automation is part of today's enterprise. During the past several years, building control automation has been a key component in helping manage lighting, HVAC (heating, ventilation, and air conditioning), safety and security, and access control in facilities. The development of open communication standards and the advent of IP-based technology have taken this to a point where allowing data drawn from these disparate systems to integrate and connect to any enterprise.

The idea of taking data mined from your building portfolio and integrating it with such systems as accounting, and ERP or business intelligence applications through one centralized network is a reality today. By turning these building assets into real-time enterprise points, you can increase integration across your enterprise to:

- Improve information management
- Optimize your strategic-decision making process
- Create performance efficiencies
- Reduce operational and labor costs
- Gain actionable intelligence that drive decisions resulting in greater ROI

However in order to truly leverage the advantages produced by an intelligent building information network, the next step needs to be taken in the form of making this data an active part of your business enterprise. Today, we must go beyond looking at buildings simply as a box to house people or things.

Our buildings are active components of an enterprise that enable connectivity and real-time business intelligence sharing with other business applications to improve efficiency, gain operational performance and obtain financial paybacks. We must make buildings better ---ones that uses less energy, have lower operating expenses, provide improved environments for occupants and deliver significant ROI and value. A building information network is not about cost; it should be about your overall long term automation and operational strategies.

An intelligent building information network is part of the enterprise. Make it part of yours.



About Our Sponsor: *Tridium* is the global leader in automation infrastructure technology and device-to-enterprise integration solutions. The company's NiagaraAX Framework® technology synchronizes, manages and controls major building system functions vital in a facility, such as heating, ventilating, and air conditioning (HVAC) systems, energy, lighting, security, fire, safety and more. Niagara based solutions make buildings better---ones that use less energy, have lower operating costs, are safer, contribute to sustainable environments and deliver significant ROI including:(1) financial and operational paybacks, (2) performance efficiencies/lower operational Costs, (3) reduced capital and operational expenses, (4) improved facility operations, (5) greater control, manageability and security of building operations, (6) better service delivery-anytime-anywhere Access, (7) reduced energy costs, (8) increased tenant/occupant satisfaction. More information can be found at www.tridium.com.

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